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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,412	04/06/2007	**Shuhei Okude**	4252-0120PUS1	9068

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EXAMINER	
ROBINSON, ELIZABETH A	
ART UNIT	**PAPER NUMBER**
1794	

NOTIFICATION DATE	DELIVERY MODE
07/06/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/584,412	OKUDE ET AL.	
	Examiner	Art Unit	
	Elizabeth Robinson	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3 and 6-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3 and 6-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3 and 6-13 are currently pending.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 23, 2009 has been entered.

Specification

The abstract of the disclosure is objected to because the content of the abstract no longer represents the claimed subject matter. The description of the metal oxide complex in the abstract is only valid for a=0 of claim 1 and n=4 in the abstract. The currently claimed perfluoroalkyl group is not represented except under the terminology "and the like". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

Claims 3 and 7-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "M" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1, as amended, no longer contains the term "M". Claims 7-13 depend from claim 3.

Claim Rejections - 35 USC § 102

Claims 1, 3, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shoshi et al. (US 2003/0104188).

Regarding claims 1 and 3, Shoshi (Paragraphs 8-9) teaches a film for optical applications comprising a substrate (base) film and a low refractivity (low refractive index) layer. The film exhibits excellent scratch resistance (Paragraph 8) and thus, is a protective film. While the film is not explicitly stated as protecting a polarizing plate, this is an intended use of the protective film. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The low refractive index layer has a refractive index in the range of 1.30 to 1.45 (Paragraph 47). This range overlaps the range of the instant claims. The low refractive index layer comprises porous silica and a polysiloxane based polymer (Paragraph 50).

The size of the porous silica particles is preferably 30 to 80nm. Thus, the particles are microparticles. A porous material would have hollow portions and pores in the shell. The polysiloxane based polymer can be the same as the material for the hardcoat layer of the film (Paragraph 50). The polysiloxane based polymer is taught in Paragraphs 25-28 and the tetraalkoxysilanes meet the limitations of the instant claim for a=0. Shoshi (Paragraph 11) teaches that the film comprises a hard coat layer between the base film and the low refractive index layer. Shoshi (Paragraph 23) further teaches that the hard coat layer is cured by heat or ionizing radiation.

Regarding claim 6, Shoshi (Paragraph 45) teaches that the refractive index of the hard coat layer is 1.50 to 1.75 and preferably 1.60 to 1.70. These ranges overlap or are fully encompassed by the range of the instant claim.

Regarding claim 7, Shoshi (Paragraphs 21) teaches that the hard coat layer can comprise fine particles of tin oxide doped with antimony or zinc antimonite with an average particle diameter of 1 to 60 nm. These materials are conductive microparticles.

Claim Rejections - 35 USC § 103

Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoshi et al. (US 2003/0104188), in view of Murakami et al. (US 5,681,900).

As stated above, Shoshi teaches a film which meets the limitations of claim 1. Shoshi (Paragraph 18) further teaches that the substrate film can be any film conventionally used for substrates for optical applications. For a protective film for a liquid crystal display, the film should be transparent and colorless (Paragraph 19).

Shoshi does not explicitly state that the substrate is an alicyclic structure-containing polymer resin.

Murakami (Column 9, lines 7-28) teaches that for uses such as liquid crystal device substrates and polarizing films, a norbornene resin composition has excellent heat resistance and transparency, low hygroscopicity and is mechanically tough.

It would be obvious to one of ordinary skill in the art to use the norbornene resin composition of Murakami, to form the substrate of Shoshi, in order to provide a transparent substrate that is tough, does not absorb water and has high heat resistance.

Claims 9, 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shoshi et al. (US 2003/0104188), in view of Nakamura et al. (US 2001/0035929).

As stated above, Shoshi teaches a film which meets the limitations of claim 1. Shoshi (Paragraph 8) further teaches that the film can be used as an antireflection film on the surface of a liquid crystal display (LCD).

Shoshi does not explicitly teach that the film is on the observation side of a polarizing plate.

Nakamura (Paragraph 137) teaches that when an antireflection film is attached to an LCD, it is preferable to use it as one of two protective films for a polarizer plate, which is then adhered to the screen.

It would be obvious to one of ordinary skill in the art to use the antireflection film of Shoshi in a conventional manner as taught by Nakamura.

Claims 1, 3, 6, 7, 9, 10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (JP 2001-233611), in view of Nakamura et al. (US 2001/0035929).

Regarding claims 1, 3, 9 and 10, Nishida (Paragraph 26) teaches a structure that can comprise a base material, a hard coating film and a coating film as described in the document, which can be used on the surface of a liquid crystal display (LCD) panel or other type of base material. The coating film is a low refractive index layer with a refractive index of 1.20 to 1.42 and can comprise hollow silica particles with a shell that seals the cavity (Paragraph 30). The matrix of the low refractive index layer (Paragraph 27) can be an alkoxy silane abovementioned in the document. These alkoxy silanes include tetraalkoxy silanes (a=0) (Paragraph 15) and fluorine-containing alkoxy silanes such as heptafluorodecyl trimethoxy silane (a=1) (Paragraph 21). Nishida (Paragraph 21) teaches that the fluorine-containing alkoxy silanes have a low refractive index. Thus, Nishida teaches matrix resins that meet the limitations of the instant claims.

Further, Nakamura (Paragraph 102) teaches that perfluoroalkyl group containing alkoxy silanes are preferable resins for a low refractive index layer of an antireflection film.

It would be obvious to one of ordinary skill in the art to choose the fluorine-containing alkoxy silanes of Nishida, as the alkoxy silane binder, since Nakamura teaches that these binders are preferred binders for a low refractive index layer and Nishida teaches that they have a lower refractive index.

Nishida (Paragraph 31) teaches that the intermediate layer should have a refractive index of 1.60 or above in order to form an antireflective film, but does not teach the material of the intermediate layer.

Nishida does not explicitly teach that the layered film composition is on a polarizing plate.

Nakamura (Paragraph 137) teaches that when an antireflection film is attached to an LCD, it is preferable to use it as one of two protective films for a polarizer plate, which is then adhered to the screen.

It would be obvious to one of ordinary skill in the art to use the antireflection film of Nishida in a conventional manner as taught by Nakamura. Nakamura (Paragraph 66) teaches that the intermediate layer between the base layer and the low refractive index layer can be an anti-glare/hard coat layer. The materials of the hard coat layer are cured by ionizing radiation or heat (Paragraphs 68-75).

It would be obvious to one of ordinary skill in the art to use the materials of Nakamura, for the hard coat layer of Nishida, in order to have a specific material that has been shown to be effective for a hard coat layer of an antireflection film.

Regarding claim 6, Nakamura (Paragraph 91) teaches that the hard coating layer has a refractive index of 1.57 to 2.00.

Regarding claims 7, 12 and 13, Nakamura (Paragraphs 87-88) teaches that the hardcoat layer can comprise metal oxide fine particle, for example indium tin oxide (ITO). ITO is electrically conductive.

Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida et al. (JP 2001-233611), in view of Nakamura et al. (US 2001/0035929) as applied to claims 1 and 7 above, and further in view of Murakami et al. (US 5,681,900).

As stated above, the film of Nishida, using the specifics of Nakamura, meets the limitations of claims 1 and 7. Nishida (Paragraph 26) teaches that the base material can be a variety of plastic materials, but does not explicitly teach an alicyclic resin.

Nakamura (Paragraph 56) teaches that the transparent support for an antireflection film can be formed from a norbornene-series polyolefin resin.

Murakami (Column 9, lines 7-28) teaches that for uses such as liquid crystal device substrates and polarizing films, a norbornene resin composition has excellent heat resistance and transparency, low hygroscopicity and is mechanically tough.

It would be obvious to one of ordinary skill in the art to use the norbornene resin composition of Murakami, to form the substrate of Nishida, in order to provide a transparent substrate that is tough, does not absorb water and has high heat resistance.

Response to Arguments

Applicant's arguments filed April 23, 2009 have been fully considered but they are not persuasive.

Applicant argues that Shoshi et al. (US 2003/0104188) does not teach a perfluoroalkyl group containing silane metal oxide complex as in claim 1. However,

since the value of "a" can be 0, a tetraalkoxy silane meets the limitations of the metal oxide complex. As stated above, Shoshi teaches tetraalkoxy silanes as the binder.

Applicant argues that Nishida et al. (JP 2001-233611) does not teach a metal oxide complex that meets the limitations of claim 1. However, as stated above, Nishida teaches both tetraalkoxy silanes and fluorine-containing alkoxy silanes that meet the limitations of the metal oxide complex of claim 1.

Applicant argues that Nakamura et al. (US 2001/0035929) does not disclose a perfluoroalkyl group containing silane metal oxide complex for the low refractive index layer as in claim 1. However, as stated above, Nakamura teaches that these resins are preferred resins for the low refractive index layer of an anti-reflection film.

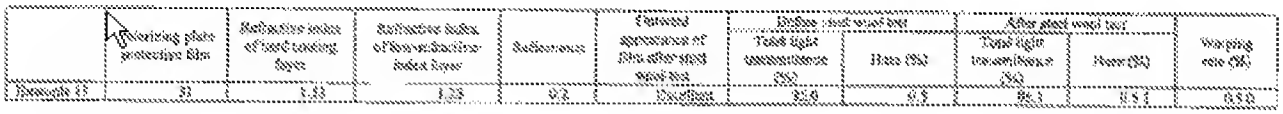
The declaration under 37 CFR 1.132 filed May 5, 2009 is insufficient to overcome the rejection of claims 1, 3 and 6-13 based upon Shoshi et al. (US 2003/0104188), Murakami et al. (US 5,681,900), Nakamura et al. (US 2001/0035929) and Nishida et al. (JP 2001-233611) as set forth in the last Office action because:

First, the showing of the declaration is not commensurate in scope with the claims. To begin with, the refractive index of the low refractive index layer for the data presented is 1.23. This is outside of the claimed refractive index range of 1.25 to 1.37. Also, the data presented is only for a perfluoroalkyl group containing silane. However, since the value of term "a" can be 0, the silane compound can also be a tetraalkoxy silane. Tetraalkoxy silanes are taught by both Shoshi and Nishida. The data is also not commensurate in scope with the claims given that there is only data given for one

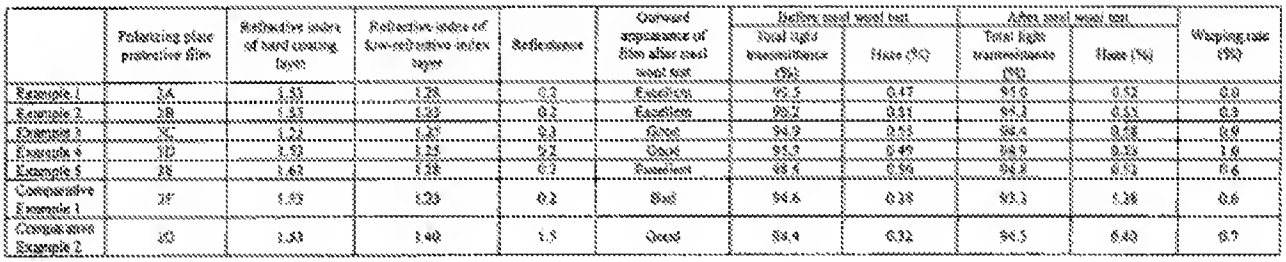
specific type of perfluoroalkyl group containing silane, while the present claims broadly encompass all perfluoroalkyl groups and given that there is no data for the low refractive index layer with refractive index at the upper end of the presently claimed refractive index range.

Also, the data is not compared to other data. As shown below, the data is similar for tetraalkoxy silanes and for perfluoroalkyl group containing silanes.

From the declaration:



From the instant specification:



The reflectance and appearance after the steel wool test for Example 11 (perfluoroalkyl group containing silane) and for Example 1 (tetraalkoxy silane) are identical. The light transmittance, haze and warping rate are slightly different in the two examples, but Paragraph 159 of the instant specification teaches that the plate of Example 1 has excellent scratch resistance and a small warping rate. While the refractive index of the low refractive index layer is lower for Example 11, this is not unexpected, since it is known in the art that fluorine-containing resins lower the refractive index (see for example Paragraph 21 of Nishida). Further, since this change

of refractive index did not result in a change of reflectance, it has not been shown that this lower refractive index provides a benefit. Also as noted above, the refractive index for Example 11 is outside of the claimed refractive index range. The refractive index of Example 1 meets the refractive index limitation of claim 1.

Regarding the declaration's argument that the film, using the perfluoroalkyl group containing silane, provides better stainproofing, this is also not unexpected. The non-stick, and thus stainproofing, behavior of fluorine containing resins is well known in the art.

Also, as stated above, Nishida and Nakamura both teach perfluoroalkyl group containing silanes contrary to the declaration's argument that these resins are not taught.

Further, with respect to the anticipation rejection of the claims using Shoshi et al. (US 2003/0104188), as cited in MPEP 706.02(b), it is noted that a rejection based on 35 USC 102(b), can only be overcome by (a) persuasively arguing that the claims are patentably distinguishable from the prior art, (b) amending the claims to patentably distinguish over the prior art, or (c) perfecting priority under 35 USC 119(e) or 120. As can be seen, comparative data is not sufficient to overcome an anticipatory rejection under 102(b), since the reference is still anticipatory for the metal oxide complex with a=0.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Robinson whose telephone number is (571)272-7129. The examiner can normally be reached on Monday- Friday 8 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. R./
Elizabeth Robinson
Examiner, Art Unit 1794

June 26, 2009

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794